UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAY 08 2009

RETURN RECEIPT REQUESTED

Mr. Stephen Halasz, Environmental Department Manager
Kleinfelder
3601 Manor Road
Austin, TX 78723

Re: Approval with Modifications
Addendum 1
Remedial Investigation and Feasibility Study Work Plan, Field Sampling Plan, and Quality Assurance Project Plan
Falcon Refinery Superfund Site; Ingleside, San Patricio County, Texas

Dear Mr. Halasz:

The purpose of this letter is to provide the U.S. Environmental Protection Agency's (EPA) "Approval with Modifications" of "Addendum 1" of the "Remedial Investigation and Feasibility Study (RI/FS) Work Plan" (WP), "RI/FS Field Sampling Plan" (FSP), and "RI/FS Quality Assurance Project Plan" (QAPP); each dated April 1, 2009. These deliverables were submitted by National Oil Recovery Corporation (NORCO) pursuant to the "Administrative Order on Consent (AOC) for Remedial Investigation and Feasibility Study," effective June 9, 2004; for the Falcon Refinery Superfund Site, Ingleside, San Patricio County, Texas. Enclosure A (Approval with Modifications; EPA's Comments on Addendum 1 of the RI/FS WP, FSP, and QAPP; Dated April 1, 2009) consists of the EPA's comments on the deliverables and are submitted pursuant to the AOC. The EPA's comments include the comments provided by the Texas Commission on Environmental Quality and the Federal and State Natural Resource Trustees.

As provided in Section IX. (Work to be Performed), Paragraph 31 of the AOC, the EPA approves Addendum 1 of the RI/FS WP, FSP, and QAPP (each dated April 1, 2009) with modifications included in the EPA's comments in Enclosure A. These comments are incorporated into and fully enforceable under this Order and NORCO must proceed to take any action required by the approved deliverables and the EPA's comments.

Please call me, at (214) 665-7437, if you have any questions or comments concerning this letter.

Sincerely yours,

Rafael A. Casanova

Rafael A. Casanova, P.G.
Remedial Project Manager

cc: Mr. Richard Bergner (National Oil Recovery Corporation)
Ms. Gloria Moran (U.S. EPA, Region 6)
Ms. Anna Milburn (U.S. EPA, Region 6)
Mr. Kenneth Shewmake (U.S. EPA, Region 6)
Mr. Gary Moore (U.S. EPA, Region 6)
Ms. Jessica White (U.S. NOAA)
Mr. Barry Forsythe (U.S. Fish and Wildlife Service)
Ms. Tammy Ash (U.S. Fish and Wildlife Service)
Mr. Phillip Winsor (Texas Commission on Environmental Quality)
Mr. Richard Seiler (Texas Commission on Environmental Quality)
Ms. Vickie Reat (Texas Commission on Environmental Quality)
Mr. Jeff Patterson (Texas Commission on Environmental Quality)
Mr. John Wilder (Texas Commission on Environmental Quality)
Mr. Steven Childress (Texas Commission on Environmental Quality)
Mr. Don Pitts (Texas Parks and Wildlife Department)
Mr. Andy Tirpak (Texas Parks and Wildlife Department)
Mr. Tommy Mobley (Texas General Land Office)

ENCLOSURE A
APPROVAL WITH MODIFICATIONS
EPA'S COMMENTS ON ADDENDUM 1
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY WORK PLAN
FIELD SAMPLING PLAN, AND QUALITY ASSURANCE PROJECT PLAN
DATED APRIL 1, 2009

FALCON REFINERY SUPERFUND SITE
INGLESIDE, SAN PATRICIO COUNTY, TEXAS
April 2009

The U.S. Environmental Protection Agency (EPA, Region 6) has performed a review of "Addendum 1" of the "Remedial Investigation and Feasibility Study (RI/FS) Work Plan (WP)," "RI/FS Field Sampling Plan" (FSP), and "RI/FS Quality Assurance Project Plan" (QAPP); each dated April 1, 2009. This Enclosure A (Approval With Modifications, EPA's Comments on Addendum 1) consists of the EPA's comments on each amended deliverable. These deliverables were submitted by National Oil Recovery Corporation (NORCO) pursuant to the "Administrative Order on Consent (AOC) for Remedial Investigation and Feasibility," effective June 9, 2004, for the Falcon Refinery Superfund Site (hereinafter "the Site"). The EPA's comments, hereinafter Enclosure A, are being submitted pursuant to the AOC and are not inconsistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), National Oil and Hazardous Substances Pollution Contingency Plan (NCP), AOC for RI/FS, and Superfund RI/FS guidance and policies. The EPA's comments also consist of and consider the comments provided by the Texas Commission on Environmental Quality (TCEQ) and the Federal and State Natural Resource Trustees.

As provided in Section IX. (Work to be Performed), Paragraph 31 of the AOC, the EPA approves Addendum 1 of the RI/FS WP, FSP, and QAPP (each dated April 1, 2009) with the modifications included in the EPA's comments in Enclosure A. These comments are incorporated into and fully enforceable under this Order and NORCO must proceed to take any action required by the approved deliverables and the EPA's comments.

EPA's Comments
General Comments Addendum 1

A. According to Section IX (Work to be Performed) Paragraph 30 of the AOC, all major deliverables that NORCO submits to the EPA must contain the following statement signed by the Project Coordinator:

> "To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false

information, including the possibility of fine and imprisonment for knowing violations."

EPA's Comments
RI/FS Field Sampling Plan Addendum 1

A. Table 3 (Sampling and Design Matrix)

RI/FS FSP Addendum 1

Table 3, of the FSP, includes the number of samples and laboratory analyses planned for these samples.

EPA's Comments

Each of the samples planned for Phase II of the RI shall be sampled for the parameters sampled during Phase I for each AOC.

B. Appendix D (VSP Evaluation Tables)

RI/FS FSP Addendum 1

Note 1 of Appendix D, of the FSP, states that for AOC-1 for, "Benzo(b)fluoranthene: the sample size equation indicates that 14 additional soil samples are recommended (65 [calculated by Method 2] - 41 historical = 14)."

EPA's Comments

According to the rationale provided by NORCO, the sample equation indicates that twenty-four (24) additional soil samples are needed (65 [calculated by Method 2] - 41 historical = 24). The Addendum 1 deliverables shall be revised accordingly.

C. Section 1.2.2 - Sampling Objectives

RI/FS FSP Addendum 1

The FSP indicates that biota sampling will take place as part of the Phase II off-site investigation.

EPA's Comments

The FSP did not include any additional discussions concerning biota sampling and the EPA is assuming that these decisions will be made during Step 2 of the ecological risk assessment process. NORCO shall schedule a meeting with the EPA, upon review of the Phase

II data, to discuss the results of the Phase I and II data in order to determine if biota sampling *will* be required for the Site.

D. Section 3.0 - Sampling Objectives

RI/FS FSP Addendum 1

The FSP states that, "The goal of Phase II is to determine the nature and extent of contamination . . . ." The FSP also states that the soil sampling is designed to assess potential hot spots.

EPA's Comments

NORCO shall schedule a meeting with the EPA, upon review of the Phase II data, to discuss the results of the Phase I and II data in order to determine if additional investigations are required to determine the nature and extent of contamination and to further delineate any hot spots that are identified at the Site.

E. Section 3.1 - On-Site Random Start Grid Locations AOC-1

RI/FS FSP Addendum 1

This section of the FSP describes the additional proposed soil sampling locations for Phase II of the RI.

EPA's Comments

The EPA agrees with the proposed soil sampling locations. Additionally, the EPA's comments provided to Kleinfelder by letters dated January 7 and March 4, 2009, indicated the locations that would require additional soil sampling and investigation for Phase II of the RI. These following additional sampling locations, taken from the Phase I maps, shall investigate the extent of the volatile organic compounds and semi-volatile organic compounds in the soil. Upon obtaining access to the background sampling locations (see Comment 1 [Section 4.4.2 - Background Sampling]), NORCO shall schedule a meeting with the EPA to discuss how the extent of contamination will be determined for these areas.

1. J-03S, J-04S, and J-09S: Several semi-volatile organic compounds, detected in the surface soil, exceeded the TCEQ and/or the EPA human health screening level.

2. J-05S and J-10S: 1,3,5-trimethylbenzene, detected in the subsurface soil, exceeded the EPA human health screening level.

F. Section 3.2 - On-Site Random Grid Locations AOC-2

RI/FS FSP Addendum 1

The FSP states that, "There are two random start grid sampling locations (Figure 4) at AOC-2 (G2-15S and G2-18S) selected by the Visual Sampling Plan (VSP).

EPA's Comments

The EPA is assuming that the number of sample locations (two [2]) specified in the text of the FSP is incorrect since Tables 1 (Areas of Concern), 2 (Summary of Table of Calculated Minimum Sample Quantities), and 3 (Sampling and Design Matrix) show that four (4) sample locations will be investigated in AOC 2.

G. Section 3.4 - On-Site Groundwater Locations

RI/FS FSP Addendum 1

This section of the FSP describes the additional proposed ground water sampling locations for Phase II of the RI.

EPA's Comments

The EPA agrees with the proposed ground water sampling and monitoring locations for Phase II of the RI. Additionally, the EPA's comments provided to Kleinfelder by letters dated January 7 and March 4, 2009, indicated the locations that would require additional ground water sampling and investigation for Phase II of the RI. These following additional sampling locations, taken from the Phase I maps, shall investigate the extent of the organic compounds in the ground water and soil. Upon obtaining access to the background sampling locations (see Comment I [Section 4.4.2 - Background Sampling), NORCO shall schedule a meeting with the EPA to discuss how the extent of contamination will be determined for these areas.

1. TW01-01: Naphthalene, detected in the ground water, exceeded the EPA human health screening level.

2. TW01-02: Benzene, detected in the ground water, exceeded the EPA human health screening level. The map provided by NORCO, in the Phase I data, did not reflect this exceedance. Ethylbenzene, naphthalene, and xylene (total), detected in the ground water, did not exceed human health screening levels but are common petroleum refinery pollutants.

3. TW01-07: Benzene, detected in the ground water, exceeded the federal "maximum contaminant level" (MCL) for drinking water and the TCEQ human health screening level. N-butylbenzene, detected in the ground water, exceeded

the EPA human health screening level. Ethylbenzene and naphthalene, detected in the ground water, did not exceed human health screening levels but are common petroleum refinery pollutants.

4. TW01-11: Benzene, detected in the ground water, exceeded the TCEQ human health screening level. Naphthalene, n-butylbenzene, and 2-methynaphthalene, detected in the ground water, exceeded the EPA human health screening level. Ethylbenzene and toluene, detected in the ground water, did not exceed human health screening levels but are common petroleum refinery pollutants.

5. TW01-12: Naphthalene, detected in the ground water, exceeded the EPA human health screening level.

6. TW01-18: Benzene, detected in the ground water, exceeded the EPA human health screening level. The map provided by NORCO, in the Phase I data, did not reflect this exceedance. Ethylbenzene, toluene, and xylene (total), detected in the ground water, did not exceed human health screening levels but are common petroleum refinery pollutants.

H. Section 4.3 - On-Site Groundwater Sampling

RI/FS FSP Addendum 1

This section of the FSP states that, "Deeper WBZs will be evaluated further in Phase II, if chemicals are detected in overlying WBZs, whether above or below appropriate MSSLs or chemical-specific applicable or relevant and appropriate requirements (ARARs) . . . ." The FSP states that this evaluation will occur during a second mobilization during the Phase II investigation.

EPA's Comments

The EPA agrees that the deeper water-bearing zones (WBZs) should be investigated further in Phase II if chemicals are detected in overlying WBZs, whether above or below appropriate screening levels. Several organic compounds have already been detected in the shallow ground water during the Phase I investigation (see Comment G [Section 3.4 - On-Site Groundwater Locations]). NORCO shall schedule a meeting with the EPA, upon review of the Phase II ground water data, to discuss the results of the Phase I and II ground water investigations in order to determine the investigation and sampling plan for the deeper WBZs.

I. Section 4.4.2 - Background Sampling

RI/FS FSP Addendum 1

This section of the FSP states that "The [background] areas were selected based on similar soil, sediment, and surface water types to AOC soil, sediment, and surface water." The

FSP also states that, "Due to the difficulty in obtaining access for background locations, the exact locations will be provided to the RPM after approval of this FSP Addendum."

EPA's Comments

The EPA agrees that the selection of the background reference areas should be based on media with similar characteristics to the media associated with the AOC being investigated. Additionally, the background reference areas shall have the same physical, chemical, geological, and biological characteristics as the Site, but have not been affected by activities on the Site. Also, background sample locations should not be established at locations directly influenced by, or in close proximity to, obvious sources (e.g., other sites, storm water and point source outfalls, bridges, and roadways, etc.).

As stated in the EPA's comments provided to Kleinfelder by letters dated January 7 and March 4, 2009, NORCO's amended deliverables should have included a discussion on the rationale for the location of background sample locations considering the nature of the activities surrounding the sample location, prevailing wind direction, and any nearby sources of contamination. The EPA's comments also stated that background sample locations should not be established at locations directly influenced by other sources. The amended deliverables should have also included a discussion on whether the background sediment sampling conducted for the wetland areas of the Site apply to the sediment locations within Redfish Bay (e.g., AOC 5). AOC 5 is a different aquatic environment than the wetland area adjacent to the Site.

Upon obtaining access to the background sampling locations, NORCO shall schedule a meeting with the EPA to discuss the rationale for the location of the background sample locations considering the nature of the activities surrounding the sample location, prevailing wind direction, and any nearby sources of contamination. The background reference areas shall have the same physical, chemical, geological, and biological characteristics as the Site, but have not been affected by activities on the Site. NORCO shall also submit this discussion in writing along with the identification of the proposed sampling locations. Additionally, NORCO shall propose six (6) background sediment sampling locations within Redfish Bay for comparison to the sample locations within AOC 5.

J. Section 4.4.3 - Off-Site Sediment and Surface Water Sampling

RI/FS FSP Addendum 1

The FSP states that, "For comparability with Phase I surface water data, Phase II surface water samples will not be filtered. If unfiltered surface water samples indicate a possible exceedence of screening criteria, at least five additional surface water samples will be collected . . . and split into filtered and unfiltered samples."

EPA's Comments

It is more than likely that total concentrations of metals will exceed a dissolved criterion. Therefore, NORCO shall split at least five (5) surface water samples into filtered and unfiltered samples and analyze as appropriate during this mobilization for Phase II. It is important to recognize that several screening values for metals are presented in terms of dissolved metals.

K. Section 8.0 - Schedule

RI/FS FSP Addendum 1

This section of the FSP provides the proposed project schedule for the RI/FS for the Site. The Draft Screening Level Ecological Risk Assessment (SLERA), Baseline Human Health Risk Assessment (BHHRA), Remedial Investigation (RI), and Feasibility Study (FS) Reports are proposed to be submitted December 2009, January 2010, July 2010, and November 2011, respectively.

EPA's Comments

As stated in all of the EPA's previous comments concerning the schedule for this RI/FS, the BHHRA, including the SLERA, cannot be completed until all of the RI data is reviewed and qualified and the RI Report is completed. Additionally, the time period in which to submit the FS Report is excessive and will delay the preparation of the Proposed Plan and Record of Decision for the Site. The Draft RI, FS, BHHRA, and SLERA Reports shall all be completed and submitted to the EPA at approximately the same timeframe. NORCO shall amend the RI/FS schedule, included with the April 2009 deliverables, and provide it to the EPA for review and approval within two weeks of the receipt of these comments. Additionally, future submittals of the RI/FS schedule shall be revised into a format that can be printed on "letter" or "legal" size paper and which can easily be read. Perhaps dividing the schedule into separate major activities may simplify the formatting.

EPA's Comments
RI/FS Work Plan Addendum 1

A. Section 7.0 - Project Management

RI/FS Work Plan Addendum 1

This section of the WP includes Figure 1 (RI/FS Organizational Chart) which identifies the project team.

EPA's Comments

The chart includes two additional risk assessment team members, Mr. David Dickey and Dr. Loren Raun. As requested by electronic mail dated October 26, 2008, in an appropriate section of the next monthly progress report please include the requirements of Section IX (Work to be Performed) Paragraph 27 of the RI/FS Order regarding changes in personnel. This section of the Order states that, "During the course of the RI/FS, NORCO must notify EPA in writing of any changes or additions in the supervising personnel used to carry out the Work, providing their names, titles, and qualifications." Additionally, under qualifications, please include any previous Superfund human health and ecological risk assessments conducted in the past by the additional personnel. This information has already been provided for Mr. Dickey, in the March 2009 Monthly Report, and does not need to be resubmitted.

EPA's Comments
RI/FS Quality Assurance Project Plan Addendum 1

A. Table 4 (Required Sample Volume, Containers, Preservatives, and Holding Times)

RI/FS QAPP Addendum 1

Table 4, of the QAPP, lists the parameters and analytical methods to be used for the aqueous samples.

EPA's Comments

For clarification purposes, the analytical liquid method to be used for the analysis of mercury is Method 7470. The QAPP lists Method 7471.

B. Section A7.2.3.4 - Confirm Appropriate Analytical Method

RI/FS QAPP Addendum 1

The QAPP identifies Appendices B (Comparison of Quantitation Limits to Ecological Screening Standards) and C (Comparison of Quantitation Limits to EPA Region 6 Human Health MSSLs and TCEQ Tier 1 PCLs), of the approved QAPP, which list the detection limits for each chemical being investigated for this RI.

EPA's Comments

The EPA identified significant issues with achieving the detection limits reported in Appendices B and C during the Phase I RI. NORCO needs to discuss these issues with the laboratory evaluating the samples in order to achieve the detection limits specified in the

approved deliverables. The EPA recognizes that the detection limits for some analytes are difficult to achieve, but the detection limits should be achievable for the majority of the analytes being investigated for this RI. Detection limit issues were identified with the following analytes investigated in AOC-1A (detection limit issues were identified for all AOCs): 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; 1,2,3-Trichloropropane; 1,2-Dibromo-3-chloropropane; 1,2-Dichloroethane; 1,4-Dioxane; bromodichloromethane; carbon tetrachloride; chloroform; Dibromochloromethane; 1,4-dichlorobenzene; 2,4-dinitrotoluene; 2,6-dinitrotoluene; 3,3-dichlorobenzidine; 4-bromophenyl phenyl ether; 4-chlorophenyl phenyl ether; 7,12-dimethylbenzo(a)anthracene; benzenethiol; benzo(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenzo(a,h)anthracene; bis(2-chloroethyl)methane; bis(2-chloroethyl)ether; hexachlorobenzene; hexachlorobutadiene; indeno(1,2,3-cd)pyrene; N-Nitro-di-n-propylamine; pentachlorphenol; and quinoline.

C. Section A7.2.5.3 - Specify Risk-Based Screening Level for Decision

RI/FS QAPP Addendum 1

This section of the QAPP states that, "Industrial exposure scenarios will be used on-site. The site will be deed recorded to only allow industrial uses for the land unless sampling data indicate the site meets residential criteria."

EPA's Comments

The screening levels presented thus far in each of NORCO's deliverables are for a residential scenario. NORCO shall amend the screening levels in each deliverable and receive prior approval from the EPA before their use for this RI.